

Date: Fri, 17 Sep 93 12:37:57 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #1108
To: Info-Hams

Info-Hams Digest Fri, 17 Sep 93 Volume 93 : Issue 1108

Today's Topics:

 * SpaceNews 20-Sep-93 *
 need expert info on nicads.
 Neighborhood watch groups
 ORBS\$261.2liners
 ORBS\$261.AMSAT
 Radio Shack HTXs
 There goes the rest of 20M (3 msgs)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 17 Sep 93 17:15:00 GMT
From: news-mail-gateway@ucsd.edu
Subject: * SpaceNews 20-Sep-93 *
To: info-hams@ucsd.edu

SB NEWS @ AMSAT \$SPC0920
* SpaceNews 20-Sep-93 *

BID: \$SPC0920

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SpaceNews
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MONDAY SEPTEMBER 20, 1993

SpaceNews originates at KD2BD in Wall Township, New Jersey, USA. It is published every week and is made available for unlimited distribution.

★ MARS OBSERVER NOTES ★

=====

The last known commands known to be received by Mars Observer was on August 20 when the orbit insertion sequence was uplinked. On August 21 at about 6PM, no signal was received from the spacecraft after the tanks were pressurized. The spacecraft has not been heard from since.

Prior to pressurizing the fuel tanks for orbit insertion, the transmitter was turned off to protect the filament in the transmitter. This is a common practice for any high-shock event and was recommended by Martin Marietta. The transmitter has been turned off and on in four previous occasions for the three trajectory correction maneuvers and deployment of the High Gain Antenna.

The odds of the fuel tank exploding is under 0.1% (or under 1 in a 1000). The pressurization sequence is started by activating the helium via dual pyro valves to pressurize the tanks to 264 psia. The nitrogen tetroxide (N₂O₄) is pressurized first, clearing the helium lines of the oxidizer. The monomethyl hydrazine tank is then pressurized. Dual series pressure regulators prevent overpressurization and dual check valves prevent the hypergolic propellants from mixing through the pressurization tubing.

Attempts were made to view to thruster firing of Mars Observer with two infrared telescopes in Hawaii, but the attempts were thwarted by cloud cover. The Hubble Space Telescope was also considered, but it was on the wrong side of the Earth and would have had to point closer to the Sun than was desired.

If Mars Observer did not execute its orbit insertion burn on August 24, it would have flown by Mars but remained in an elliptical orbit around the Sun between the Earth and Mars. Opportunities to enter Mars orbit may occur 10 months to 2 year from now, provided the spacecraft can be recovered.

The possibility exists that the Mars Observer may have entered orbit around Mars on its own.

If Mars Observer was not maintaining proper attitude and the solar arrays were not pointed at the Sun, the spacecraft would last about 7 days before running out of electrical power.

If Mars Observer is lost, then the Russian Mars '94 mission would lose about half of its science data, since Mars Observer was to act as a communications relay for the Mars '94 mission. Also, the Mars '96 mission may have to be redesigned.

If Mars Observer is not recovered, it will be the first post-launch failure of a NASA planetary spacecraft since Surveyor 7 in 1967, a period spanning 26 years.

[Info via Ron Baalke at JPL]

★ F0-20 SCHEDULE ★

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The following is the latest F0-20 mode JA transponder schedule from the JARL:

22-Sep-93 08:30 through 24-Sep-93 09:05 UTC

29-Sep-93 08:50 through 30-Sep-93 09:11 UTC

[Info via 73 Richard, G3RWL]

★ VATICAN ACTIVE ON A0-13 ★

=====

Pino (I0DUD), Antonio (I0JX) and Eric (WB6GYD) will be conducting A0-13 Mode B operations from the Vatican on Saturday, September 25 starting approximately 0500Z and again on Sunday, September 26 (They are unsure of the operating time on Sunday). The call sign will be announced at that time and a QSL route will be established. This operation was previously announced in an Oscar Satellite Report. In addition, they plan to spend Friday night (probably 2000-0500Z 9/24-25) at the Vatican and operate 20/30/40 meters, so look for them there.

[Info via Eric Archer, WB6GYD]

★ AMSAT-SA NEWS ★

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Hans van de Groenendaal, ZS6AKV, was re-elected as the President of SA AMSAT at the society's Annual general meeting held in Johannesburg on September 11.

The AGM was held after the 14th annual Space Communications Conference - SPACECON 93.

The conference was attended by 60 delegates and featured a major update on SUNSAT, the University of Stellenbosch Satellite. Other papers covered Digital Signal Processing, How to solve intermod interference on 2m Satellite

Downlinks, Using 29MHz satellite signals to study propagation, Phase 3D Update, and many others.

[Info via Hans van de Groenendaal, ZS6AKV]

* THANKS! *

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Thanks to all those who sent messages of appreciation regarding SpaceNews, especially:

G0KTN WA1GUD ZS1RON KB2GGS N2K0J WB2COP KA3UNR PA3GCK KD4EMI WD4AHZ
N5HTQ SM5ENX F6HTJ N6ZOP VS6XFK

* FEEDBACK/INPUT WELCOMED *

=====

Mail to SpaceNews should be directed to the editor (John, KD2BD) via any of the following paths:

FAX : 1-908-747-7107
PACKET : KD2BD @ N2KZH.NJ.USA.NA
INTERNET : kd2bd@ka2qhd.ocpt.ccur.com -or- kd2bd@amsat.org

MAIL : John A. Magliacane, KD2BD
Department of Engineering and Technology
Advanced Technology Center
Brookdale Community College
Lincroft, New Jersey 07738
U.S.A.

<<= SpaceNews: The first amateur newsletter read in space! -=>>

/EX

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John A. Magliacane, KD2BD * /\ * Voice : 1-908-224-2948
Advanced Technology Center |/\| Packet : KD2BD @ N2KZH.NJ.USA.NA
Brookdale Community College |/\| Internet: kd2bd@ka2qhd.ocpt.ccur.com
Lincroft, NJ 07738 * \/\ * Morse : -. -.. ..--- -... -..

Date: Fri, 17 Sep 1993 17:27:05 GMT
From: cs.utexas.edu!utnut!torn!nott!nrcnet0!larry.nrc.ca!larry@uunet.uu.net
Subject: need expert info on nicads.
To: info-hams@ucsd.edu

In article <m9c3n8INNar@exodus.Eng.Sun.COM> falk@peregrine.Eng.Sun.COM (Ed Falk) writes:

>From: falk@peregrine.Eng.Sun.COM (Ed Falk)

>Subject: need expert info on nicads.

>Date: 14 Sep 1993 18:35:20 GMT

>As you've probably guessed by now, I'm planning to design and build my own charger -- one that does it RIGHT for a change. Can anybody tell me what the lower (discharge) and upper (full charge) voltages should be? Can anybody tell me what good discharge and charge currents should be? (I'll be mainly using this to charge AA's for my camera gear.)

>Of course, a pointer to a consumer charger that does the same job would be nice too.

As someone else mentioned MAXIM makes a chip, the MAX713 that is a complete Nicad charger controller on a chip ... other than a source of DC, it requires a pass transistor a couple of R's and C's. It uses dv/dt sensing to determine end of charge, and can also use temperature (you need a pair of thermistors ... one for ambient and one in the battery pack. It will charge from 1 to 16 cells, fast charge rate from C/3 to 1C (!). Switches to trickle charge (with a selectable charge rate) when charge is complete. It's cheap (a few bucks, as I recall). There is an app. note and spec sheet available.

I've not yet built my super-charger, but intend to over the winter.

MAXIM can be reached at

Maxim Integrated Products
120 San Gabriel Drive
Sunnyvale, CA 94086
(408) 737-7600

Or call 1-800-998-8800 for literature, app notes, etc.

Date: Wed, 15 Sep 93 15:42:00 GMT
From: mercury.hsi.com!a3bee2.radnet.com!cyphyn!randy@uunet.uu.net
Subject: Neighborhood watch groups
To: info-hams@ucsd.edu

mcduffie@unlinfo2.unl.edu (Gary McDuffie Sr) writes:

: robert@amanda.jpunix.com (robert) writes:

:

D

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:
: >Or...establish your OWN repeater.
:
: > --Robert
:
:
: Yeah! Then the crooks will have a central place to gather information!
:
: Gary

```

See? Thats yet another thing to consider, too.

Short-hop simplex may prove to be the lowest cost, best secure way to do it.
 ---providing the other issues are addressed and there's a way clear to do it,
 at all.

This is going to involve something like 3 to 8 hours per nite, with possible
 shift changes, coffee and 'nessesarys', and the communications that goes
 along with that.

If there NO chit chat allowed,..only the passing of info up n down the line
 then there'll be a minimum of inter QRM....and a minimum chance of a thug
 using a scanner, to tell where evryone was/doing etc.

Add too, battery life conservation by minimum talking.

Add use of only simplex, you further improve all the above.

The only thing, is they'll have to set up so everyone is WELL within range
 of at least 2 others, under all conditions of HT use:

held sideways, speaking too soft, in amonst branches and all that.

Rubber ducky antennas are LOUSY radiators, but they do make handling the rig
 easier.

To not run the battery down, everyone on an HT would have to use low power
 only/ long run time battery packs...not the '7 watt battery' ones.

PS

US Army used to use rigs that had 16 ft whips! Hows THAT for an HT!
 Had to use a 1 1/2 volt or 7.5 volt battery and a 90volt battery, good
 for a couple days...and you had to wear the set on your back.

Power out put was like 1/4 to 1 watt.

--

Randy KA1UNW

If you get a shock while
 servicing your equipment,
 DON'T JUMP!

"Works for me!"

randy@192.153.4.200

-Peter Keyes

You might break an expensive tube!

Date: 17 Sep 93 18:38:56 GMT
From: news-mail-gateway@ucsd.edu
Subject: ORBS\$261.2liners
To: info-hams@ucsd.edu

SB KEPS @ AMSAT \$ORBS-261.N
2Line Orbital Elements 261.AMSAT

HR AMSAT ORBITAL ELEMENTS FOR AMATEUR SATELLITES IN NASA FORMAT
FROM N3FKV HEWITT, TX September 18, 1993
BID: \$ORBS-261.N

DECODE 2-LINE ELSETS WITH THE FOLLOWING KEY:

1 AAAAAU 00 0 0 BBBB.BBBBBBBB .CCCCCCCC 00000-0 00000-0 0 DDDZ
2 AAAAA EEE.EEEE FFF.FFFF GGGGGG HHH.HHHH III.IIII JJ.JJJJJJJKKKKKZ
KEY: A-CATALOGNUM B-EPOCHTIME C-DECAY D-ELSETNUM E-INCLINATION F-RAAN
G-ECCENTRICITY H-ARGPERIGEE I-MNANOM J-MNMOTION K-ORBITNUM Z-CHECKSUM

TO ALL RADIO AMATEURS BT

AO-10

1 14129U 83 58 B 93259.42949630 -.000000046 00000-0 99999-4 0 335
2 14129 27.1446 5.6618 6021589 114.5953 317.8249 2.05878539 77148

UO-11

1 14781U 84 21 B 93259.57002690 .00000170 00000-0 32891-4 0 4386
2 14781 97.8060 281.9085 0013088 64.5925 295.6635 14.69053438510136

RS-10/11

1 18129U 87 54 A 93257.90869970 .000000088 00000-0 89554-4 0 6481
2 18129 82.9280 172.3049 0013313 68.8094 291.4476 13.72323085312153

AO-13

1 19216U 88 51 B 93250.49598972 .000000071 00000-0 -13073-2 0 6412
2 19216 57.8702 296.0121 7208616 323.7398 4.4692 2.09716778 40080

FO-20

1 20480U 90 13 C 93250.03648670 -.000000015 00000-0 -44580-5 0 4551
2 20480 99.0294 90.6876 0539922 261.2006 92.7624 12.83220718167819

AO-21

1 21087U 91 6 A 93258.82210440 .000000085 00000-0 82656-4 0 8513
2 21087 82.9462 345.7517 0036538 127.3942 233.0529 13.74524611131896

RS-12/13

1 21089U 91 7 A 93255.86883278 .000000014 00000-0 85844-5 0 4210
2 21089 82.9210 217.0842 0028867 157.6305 202.6117 13.74026218130564

ARSENE

1 22654U 93 31 B 93241.80475365 -.000000049 00000-0 99999-4 0 211
2 22654 1.3018 119.8566 2933615 152.1382 232.4293 1.42202460 1626

UO-14

1 20437U 90 5 B 93259.67801905 .000000046 00000-0 25689-4 0 7716
2 20437 98.6102 342.9259 0010237 276.7534 83.2510 14.29791555190507

AO-16

1 20439U 90 5 D 93260.09418943 .000000030 00000-0 19652-4 0 5761
2 20439 98.6177 344.3011 0010498 276.0813 83.9175 14.29849667190574
DO-17
1 20440U 90 5 E 93259.72504322 .000000030 00000-0 19635-4 0 5781
2 20440 98.6179 344.1719 0010642 276.9065 83.0906 14.29986108190531
WO-18
1 20441U 90 5 F 93259.83579292 .000000024 00000-0 17161-4 0 5800
2 20441 98.6179 344.3024 0011341 277.0277 82.9614 14.29964956190550
LO-19
1 20442U 90 5 G 93254.23450415 .000000034 00000-0 20866-4 0 5756
2 20442 98.6187 338.9526 0011692 294.2082 65.7878 14.30055360189764
UO-22
1 21575U 91 50 B 93258.21651950 .000000056 00000-0 25939-4 0 2751
2 21575 98.4663 332.8513 0008598 35.8209 324.3553 14.36850048113593
KO-23
1 22077U 92 52 B 93249.13704215 .000000000 00000-0 99999-4 0 1144
2 22077 66.0790 154.7002 0000483 354.1910 5.9105 12.86279206 50250
NOAA-9
1 15427U 84123 A 93259.74309729 .000000059 00000-0 41728-4 0 4609
2 15427 99.0926 301.4687 0014290 272.1904 87.7636 14.13545037451714
NOAA-10
1 16969U 86 73 A 93259.71206390 .000000051 00000-0 30111-4 0 3036
2 16969 98.5179 272.0121 0014229 49.3707 310.8720 14.24831329363667
NOAA-11
1 19531U 88 89 A 93259.66276955 .000000154 00000-0 93369-4 0 2139
2 19531 99.1420 237.3143 0011336 178.2684 181.8511 14.12916030256598
MET-3/3
1 20305U 89 86 A 93260.03190166 .000000043 00000-0 99999-4 0 7351
2 20305 82.5497 100.0854 0014865 250.1871 109.7648 13.16023498187180
FY-1/2
1 20788U 90 81 A 93257.93942524 -.000000008 00000-0 63356-5 0 6283
2 20788 98.8547 281.6234 0016605 61.8397 298.4445 14.01292439155154
MET-2/20
1 20826U 90 86 A 93259.80511230 .000000024 00000-0 16538-4 0 5820
2 20826 82.5244 3.4858 0014279 90.4112 269.8684 13.83557223149953
MET-3/4
1 21232U 91 30 A 93256.82905783 .000000043 00000-0 99999-4 0 4014
2 21232 82.5445 4.9697 0013624 151.6360 208.5507 13.16454961114994
NOAA-12
1 21263U 91 32 A 93259.62098399 .000000128 00000-0 65870-4 0 6687
2 21263 98.6511 288.0337 0012596 313.6703 46.3448 14.22310141121645
MET-3/5
1 21655U 91 56 A 93259.22463762 .000000043 00000-0 99999-4 0 4586
2 21655 82.5526 310.2198 0013121 156.9113 203.2601 13.16823804100402
MET-2/21
1 22782U 93 55 A 93259.09859596 .000000020 00000-0 13099-4 0 137
2 22782 82.5452 63.6357 0021195 275.6959 84.1782 13.82985365 2204
MIR

1 16609U 86 17 A 93259.97340085 .00008323 00000-0 10814-3 0 3041
 2 16609 51.6196 118.3481 0004782 101.3001 258.8522 15.59749139433459
 HUBBLE
 1 20580U 90 37 B 93258.68191761 .00000523 00000-0 42011-4 0 1815
 2 20580 28.4701 200.9986 0004316 272.8522 87.1591 14.92826359185054
 GRO
 1 21225U 91 27 B 93259.62659304 .00030305 00000-0 17973-3 0 9917
 2 21225 28.4612 348.9177 0004286 281.0632 78.9543 15.76479502 14544
 UARS
 1 21701U 91 63 B 93247.37464806 -.00000772 00000-0 -57565-4 0 2558
 2 21701 56.9828 224.1299 0003966 86.4471 273.7082 14.96117854108154
 /EX

Date: 17 Sep 93 18:37:20 GMT
 From: news-mail-gateway@ucsd.edu
 Subject: ORBS\$261.AMSAT
 To: info-hams@ucsd.edu

SB KEPS @ AMSAT \$ORBS-261.0
 Orbital Elements 261.OSCAR

HR AMSAT ORBITAL ELEMENTS FOR OSCAR SATELLITES
 FROM N3FKV HEWITT, TX September 18, 1993
 BID: \$ORBS-261.0
 TO ALL RADIO AMATEURS BT

Satellite: A0-10
 Catalog number: 14129
 Epoch time: 93259.42949630
 Element set: 33
 Inclination: 27.1446 deg
 RA of node: 5.6618 deg
 Eccentricity: 0.6021589
 Arg of perigee: 114.5953 deg
 Mean anomaly: 317.8249 deg
 Mean motion: 2.05878539 rev/day
 Decay rate: -4.6e-07 rev/day^2
 Epoch rev: 7714
 Checksum: 320

Satellite: U0-11
 Catalog number: 14781
 Epoch time: 93259.57002690
 Element set: 438
 Inclination: 97.8060 deg

RA of node: 281.9085 deg
Eccentricity: 0.0013088
Arg of perigee: 64.5925 deg
Mean anomaly: 295.6635 deg
Mean motion: 14.69053438 rev/day
Decay rate: 1.70e-06 rev/day^2
Epoch rev: 51013
Checksum: 316

Satellite: RS-10/11
Catalog number: 18129
Epoch time: 93257.90869970
Element set: 648
Inclination: 82.9280 deg
RA of node: 172.3049 deg
Eccentricity: 0.0013313
Arg of perigee: 68.8094 deg
Mean anomaly: 291.4476 deg
Mean motion: 13.72323085 rev/day
Decay rate: 8.8e-07 rev/day^2
Epoch rev: 31215
Checksum: 323

Satellite: A0-13
Catalog number: 19216
Epoch time: 93250.49598972
Element set: 641
Inclination: 57.8702 deg
RA of node: 296.0121 deg
Eccentricity: 0.7208616
Arg of perigee: 323.7398 deg
Mean anomaly: 4.4692 deg
Mean motion: 2.09716778 rev/day
Decay rate: 7.1e-07 rev/day^2
Epoch rev: 4008
Checksum: 324

Satellite: F0-20
Catalog number: 20480
Epoch time: 93250.03648670
Element set: 455
Inclination: 99.0294 deg
RA of node: 90.6876 deg
Eccentricity: 0.0539922
Arg of perigee: 261.2006 deg
Mean anomaly: 92.7624 deg
Mean motion: 12.83220718 rev/day
Decay rate: -1.5e-07 rev/day^2

Epoch rev: 16781
Checksum: 304

Satellite: A0-21
Catalog number: 21087
Epoch time: 93258.82210440
Element set: 851
Inclination: 82.9462 deg
RA of node: 345.7517 deg
Eccentricity: 0.0036538
Arg of perigee: 127.3942 deg
Mean anomaly: 233.0529 deg
Mean motion: 13.74524611 rev/day
Decay rate: 8.5e-07 rev/day²
Epoch rev: 13189
Checksum: 303

Satellite: RS-12/13
Catalog number: 21089
Epoch time: 93255.86883278
Element set: 421
Inclination: 82.9210 deg
RA of node: 217.0842 deg
Eccentricity: 0.0028867
Arg of perigee: 157.6305 deg
Mean anomaly: 202.6117 deg
Mean motion: 13.74026218 rev/day
Decay rate: 1.4e-07 rev/day²
Epoch rev: 13056
Checksum: 296

Satellite: ARSENE
Catalog number: 22654
Epoch time: 93241.80475365
Element set: 21
Inclination: 1.3018 deg
RA of node: 119.8566 deg
Eccentricity: 0.2933615
Arg of perigee: 152.1382 deg
Mean anomaly: 232.4293 deg
Mean motion: 1.42202460 rev/day
Decay rate: -4.9e-07 rev/day²
Epoch rev: 162
Checksum: 258

/EX

SB KEPS @ AMSAT \$ORBS-261.D
Orbital Elements 261.MICROS

HR AMSAT ORBITAL ELEMENTS FOR THE MICROSATS
FROM N3FKV HEWITT, TX September 18, 1993
BID: \$ORBS-261.D
TO ALL RADIO AMATEURS BT

Satellite: U0-14
Catalog number: 20437
Epoch time: 93259.67801905
Element set: 771
Inclination: 98.6102 deg
RA of node: 342.9259 deg
Eccentricity: 0.0010237
Arg of perigee: 276.7534 deg
Mean anomaly: 83.2510 deg
Mean motion: 14.29791555 rev/day
Decay rate: 4.6e-07 rev/day²
Epoch rev: 19050
Checksum: 310

Satellite: A0-16
Catalog number: 20439
Epoch time: 93260.09418943
Element set: 576
Inclination: 98.6177 deg
RA of node: 344.3011 deg
Eccentricity: 0.0010498
Arg of perigee: 276.0813 deg
Mean anomaly: 83.9175 deg
Mean motion: 14.29849667 rev/day
Decay rate: 3.0e-07 rev/day²
Epoch rev: 19057
Checksum: 329

Satellite: D0-17
Catalog number: 20440
Epoch time: 93259.72504322
Element set: 578
Inclination: 98.6179 deg
RA of node: 344.1719 deg
Eccentricity: 0.0010642
Arg of perigee: 276.9065 deg
Mean anomaly: 83.0906 deg
Mean motion: 14.29986108 rev/day
Decay rate: 3.0e-07 rev/day²
Epoch rev: 19053
Checksum: 314

Satellite: W0-18
Catalog number: 20441
Epoch time: 93259.83579292
Element set: 580
Inclination: 98.6179 deg
RA of node: 344.3024 deg
Eccentricity: 0.0011341
Arg of perigee: 277.0277 deg
Mean anomaly: 82.9614 deg
Mean motion: 14.29964956 rev/day
Decay rate: $2.4\text{e-}07$ rev/day²
Epoch rev: 19055
Checksum: 330

Satellite: L0-19
Catalog number: 20442
Epoch time: 93254.23450415
Element set: 575
Inclination: 98.6187 deg
RA of node: 338.9526 deg
Eccentricity: 0.0011692
Arg of perigee: 294.2082 deg
Mean anomaly: 65.7878 deg
Mean motion: 14.30055360 rev/day
Decay rate: $3.4\text{e-}07$ rev/day²
Epoch rev: 18976
Checksum: 324

Satellite: U0-22
Catalog number: 21575
Epoch time: 93258.21651950
Element set: 275
Inclination: 98.4663 deg
RA of node: 332.8513 deg
Eccentricity: 0.0008598
Arg of perigee: 35.8209 deg
Mean anomaly: 324.3553 deg
Mean motion: 14.36850048 rev/day
Decay rate: $5.6\text{e-}07$ rev/day²
Epoch rev: 11359
Checksum: 317

Satellite: K0-23
Catalog number: 22077
Epoch time: 93249.13704215
Element set: 114
Inclination: 66.0790 deg
RA of node: 154.7002 deg

Eccentricity: 0.0000483
Arg of perigee: 354.1910 deg
Mean anomaly: 5.9105 deg
Mean motion: 12.86279206 rev/day
Decay rate: .00000000 rev/day^2
Epoch rev: 5025
Checksum: 242

/EX

SB KEPS @ AMSAT \$ORBS-261.W
Orbital Elements 261.WEATHER

HR AMSAT ORBITAL ELEMENTS FOR WEATHER SATELLITES
FROM N3FKV HEWITT, TX September 18, 1993
BID: \$ORBS-261.W
TO ALL RADIO AMATEURS BT

Satellite: NOAA-9
Catalog number: 15427
Epoch time: 93259.74309729
Element set: 460
Inclination: 99.0926 deg
RA of node: 301.4687 deg
Eccentricity: 0.0014290
Arg of perigee: 272.1904 deg
Mean anomaly: 87.7636 deg
Mean motion: 14.13545037 rev/day
Decay rate: 5.9e-07 rev/day^2
Epoch rev: 45171
Checksum: 325

Satellite: NOAA-10
Catalog number: 16969
Epoch time: 93259.71206390
Element set: 303
Inclination: 98.5179 deg
RA of node: 272.0121 deg
Eccentricity: 0.0014229
Arg of perigee: 49.3707 deg
Mean anomaly: 310.8720 deg
Mean motion: 14.24831329 rev/day
Decay rate: 5.1e-07 rev/day^2
Epoch rev: 36366
Checksum: 295

Satellite: NOAA-11
Catalog number: 19531
Epoch time: 93259.66276955

Element set: 213
Inclination: 99.1420 deg
RA of node: 237.3143 deg
Eccentricity: 0.0011336
Arg of perigee: 178.2684 deg
Mean anomaly: 181.8511 deg
Mean motion: 14.12916030 rev/day
Decay rate: 1.54e-06 rev/day^2
Epoch rev: 25659
Checksum: 298

Satellite: MET-3/3

Catalog number: 20305
Epoch time: 93260.03190166
Element set: 735
Inclination: 82.5497 deg
RA of node: 100.0854 deg
Eccentricity: 0.0014865
Arg of perigee: 250.1871 deg
Mean anomaly: 109.7648 deg
Mean motion: 13.16023498 rev/day
Decay rate: 4.3e-07 rev/day^2
Epoch rev: 18718
Checksum: 293

Satellite: FY-1/2

Catalog number: 20788
Epoch time: 93257.93942524
Element set: 628
Inclination: 98.8547 deg
RA of node: 281.6234 deg
Eccentricity: 0.0016605
Arg of perigee: 61.8397 deg
Mean anomaly: 298.4445 deg
Mean motion: 14.01292439 rev/day
Decay rate: -8.0e-08 rev/day^2
Epoch rev: 15515
Checksum: 336

Satellite: MET-2/20

Catalog number: 20826
Epoch time: 93259.80511230
Element set: 582
Inclination: 82.5244 deg
RA of node: 3.4858 deg
Eccentricity: 0.0014279
Arg of perigee: 90.4112 deg
Mean anomaly: 269.8684 deg

Mean motion: 13.83557223 rev/day
Decay rate: 2.4e-07 rev/day^2
Epoch rev: 14995
Checksum: 305

Satellite: MET-3/4
Catalog number: 21232
Epoch time: 93256.82905783
Element set: 401
Inclination: 82.5445 deg
RA of node: 4.9697 deg
Eccentricity: 0.0013624
Arg of perigee: 151.6360 deg
Mean anomaly: 208.5507 deg
Mean motion: 13.16454961 rev/day
Decay rate: 4.3e-07 rev/day^2
Epoch rev: 11499
Checksum: 299

Satellite: NOAA-12
Catalog number: 21263
Epoch time: 93259.62098399
Element set: 668
Inclination: 98.6511 deg
RA of node: 288.0337 deg
Eccentricity: 0.0012596
Arg of perigee: 313.6703 deg
Mean anomaly: 46.3448 deg
Mean motion: 14.22310141 rev/day
Decay rate: 1.28e-06 rev/day^2
Epoch rev: 12164
Checksum: 301

Satellite: MET-3/5
Catalog number: 21655
Epoch time: 93259.22463762
Element set: 458
Inclination: 82.5526 deg
RA of node: 310.2198 deg
Eccentricity: 0.0013121
Arg of perigee: 156.9113 deg
Mean anomaly: 203.2601 deg
Mean motion: 13.16823804 rev/day
Decay rate: 4.3e-07 rev/day^2
Epoch rev: 10040
Checksum: 263

Satellite: MET-2/21

Catalog number: 22782
Epoch time: 93259.09859596
Element set: 13
Inclination: 82.5452 deg
RA of node: 63.6357 deg
Eccentricity: 0.0021195
Arg of perigee: 275.6959 deg
Mean anomaly: 84.1782 deg
Mean motion: 13.82985365 rev/day
Decay rate: 2.0e-07 rev/day^2
Epoch rev: 220
Checksum: 323

/EX

SB KEPS @ AMSAT \$ORBS-261.M
Orbital Elements 261.MISC

HR AMSAT ORBITAL ELEMENTS FOR MANNED AND MISCELLANEOUS SATELLITES
FROM N3FKV HEWITT, TX September 18, 1993
BID: \$ORBS-261.M
TO ALL RADIO AMATEURS BT

Satellite: MIR
Catalog number: 16609
Epoch time: 93259.97340085
Element set: 304
Inclination: 51.6196 deg
RA of node: 118.3481 deg
Eccentricity: 0.0004782
Arg of perigee: 101.3001 deg
Mean anomaly: 258.8522 deg
Mean motion: 15.59749139 rev/day
Decay rate: 8.323e-05 rev/day^2
Epoch rev: 43345
Checksum: 302

Satellite: HUBBLE
Catalog number: 20580
Epoch time: 93258.68191761
Element set: 181
Inclination: 28.4701 deg
RA of node: 200.9986 deg
Eccentricity: 0.0004316
Arg of perigee: 272.8522 deg
Mean anomaly: 87.1591 deg
Mean motion: 14.92826359 rev/day
Decay rate: 5.23e-06 rev/day^2
Epoch rev: 18505

Checksum: 307

Satellite: GRO
Catalog number: 21225
Epoch time: 93259.62659304
Element set: 991
Inclination: 28.4612 deg
RA of node: 348.9177 deg
Eccentricity: 0.0004286
Arg of perigee: 281.0632 deg
Mean anomaly: 78.9543 deg
Mean motion: 15.76479502 rev/day
Decay rate: 3.0305e-04 rev/day^2
Epoch rev: 1454
Checksum: 312

Satellite: UARS
Catalog number: 21701
Epoch time: 93247.37464806
Element set: 255
Inclination: 56.9828 deg
RA of node: 224.1299 deg
Eccentricity: 0.0003966
Arg of perigee: 86.4471 deg
Mean anomaly: 273.7082 deg
Mean motion: 14.96117854 rev/day
Decay rate: -7.72e-06 rev/day^2
Epoch rev: 10815
Checksum: 323

/EX

Date: Wed, 15 Sep 93 15:53:32 GMT
From: mercury.hsi.com!a3bee2.radnet.com!cyphyn!randy@uunet.uu.net
Subject: Radio Shack HTXs
To: info-hams@ucsd.edu

lambert@estd.nrl.navy.mil (LAMBERT, R) writes:

: About that "spur" at 146.76 on the Radio Shack HTX-202. I've
: noticed that it disappears when I hook up a real antenna.

:
: Bob, N3AJT

:
Thats a weak harmonic from the guts of the radio.

By connecting the real antenna, the 'noise' out there drowns out the spur,

which radiates from the side or front of the set...right where a rubber ducky can't help but pick it up.

A fiend of mine has one and we noticed the same things.

```
--
Randy KA1UNW           If you get a shock while
                        servicing your equipment,      "Works for me!"
randy@192.153.4.200    DON'T JUMP!                    -Peter Keyes
                        You might break an expensive tube!
```

Date: Wed, 15 Sep 93 15:20:21 GMT
From: mercury.hsi.com!a3bee2.radnet.com!cyphyn!randy@uunet.uu.net
Subject: There goes the rest of 20M
To: info-hams@ucsd.edu

```
randolph@est.enet.dec.com (Tom Randolph) writes:
:
:
: Not only CW, and not only on HF. I've had packet bleeps blast loud and clear
: right into the middle of 2m FM simplex conversations. At least if the packet
: station hears you, it waits, but otherwise it keys right over you.
: -Tom R.      N100Q      randolph@est.enet.dec.com
```

I have to admit, I have a 2mtr set....so I've heard the same stuff too.....
ON REPEATERS! On top of QSO's.

Concerning packet / simplex....there ARE certain freqs 'set aside' for packet use, and it's a good idea to not run voice there.
Packet can't HEAR you...most packet stations have NO speakers and so all you are is a flash on a LED to such a station, that can't be connected to.
Packet is automated and will keep on sending til it connects...thus you get relentless QRM.

Where are you trying to run simplex?
May I suggest 147.55---147.58 as a less congested place to go?
146.5xx region, I know is brimming full of voice-simplex and the 145 region has a lot of packet...but the 147.55-147.58 (in my region) is hardly used by any one, is not an input nor output for any of those repeaters.
Thats why, for what little 2mtr intercomming I do, I use that portion.

```
--
Randy KA1UNW           If you get a shock while
                        servicing your equipment,      "Works for me!"
```

randy@192.153.4.200

DON'T JUMP!

-Peter Keyes

You might break an expensive tube!

Date: Wed, 15 Sep 93 15:06:20 GMT

From: mercury.hsi.com!a3bee2.radnet.com!cyphyn!randy@uunet.uu.net

Subject: There goes the rest of 20M

To: info-hams@ucsd.edu

rwa@aupair.cs.athabascau.ca (Ross Alexander) writes:

:
: Just to set things straight: There is no such thing as a Canadian
: phone subband. There is no such thing as a Canadian CW subband.
: There is no such thing as Canadian subbands, period. WE HAVE NO
: GOVERNMENT-MANDATED SUBBANDS, just bands. What we have is a
: gentlemen's agreement, and it works fine. We have incentive licensing
: as well, and *it* works fine; it just doesn't confuse proficiency in a
: single mode with general proficiency.

:
: About the other thing: well, the hidden-station phenomenon is hardly
: new. It's got almost nothing to do with mode.

:
: regards,
: Ross VE6PDQ

:
: Ok...I'm not in Canada , so I don't 100% know all the
bands that are used there.

If Canadian Bands are all inclusive where CW and phone co-share, then
my error for saying SUB band.

The issue tho is they start up their QSO right atop a CW QSO, and by
me tuning them in, their QSO is in English and French...with VE--- calls.

So...those particular people apparently don't give a hoot about someone
elses QSO.

Whats this 'hidden station' effect?--or are you rpleying to a 2nd post?

:
:
:
: --
: Ross Alexander, rwa@cs.athabascau.ca, (403) 675 6311,
ve6pdq@nebulus.ampr.ab.ca
: "Arguably worse, the compiler can produce any result it deems fit, up
: to and including the start of World War III (assuming the right
: optional hardware has been installed)." -- Fortran FAQ

--

Randy KA1UNW

If you get a shock while

servicing your equipment, "Works for me!"
randy@192.153.4.200 DON'T JUMP! -Peter Keyes
You might break an expensive tube!

Date: Wed, 15 Sep 93 14:56:32 GMT
From: mercury.hsi.com!a3bee2.radnet.com!cyphyn!randy@uunet.uu.net
Subject: There goes the rest of 20M
To: info-hams@ucsd.edu

gary@ke4zv.atl.ga.us (Gary Coffman) writes:
: In article <1993Sep14.135910.15580@mnemosyne.cs.du.edu> lkollar@nyx.cs.du.edu
(Larry Kollar) writes:
: >

Self-policing implies some power
: >of enforcement, and we just don't have that.
:
: That's not really what "self policing" means. The emphasis is on the
: *self* part. What it means is you are supposed to police yourself in
: your operation on the air. Some hams also "snitch" on others, or even
: resort to vigilante action, but that's not what self policing means.
:
: Gary

Exactly!

But...to deal with this willful QRM or strange broadcasts...and stuff
that ALL of us here will agree is a no-no...THAT is the problem...
What is there to do (really do).....Nothing , right now?

Some of these jerks, use the visit you pay them (to ask 'em to please
cool-it) as a form of RST report:
(ah! I must have gotten to them...lookit all these guys *)

It used to be, that such a visit was plenty enough to make the guy stop.

That won't work anymore.

QSY? To where? In the case that I'm referring to, this guy dials after you
and waits for you to resurface...

We've changed bands...80, 40, 15, 10 2 and he knows no boundrys, so
wether or not it's an Extra freq or a Novice freq or cb ...he's there,
with a rig, or some home-wired power oscillator modulated by 60 cps, using
parts he gets from ham fests!

There's about 15 20 people now, who he picks on as often as he is able to
and none of us have had success with getting him to stop using legal

means.

The Radio Station (WFIF 1500kc) had to wait until one of their advertisers bailed out due to the strange broadcasts % along with telephone harrasment, so to be able to take him to court over the 'damages' aspect...not the radio aspect.

* He actually said this later in one of his tirades on 10 mtrs.

% He Intermittantly gets on right after WFIF signs off at sun set and does a 5 minute transmission, using...it looks like..250 watts on a loaded wire in his back yard. 250 watts as determined by RF volts at 100meters.

I'm supried no one has heard of his stuff....which includes bootlegging others calls....he either pretends he's that person and carrys out a normal QSO...or he uses foul language and acts like a cb'er....and signs with who ever's call he feels like using.

(when he's behaving, he uses his own call!)

===

By the way...we traced his beginnings to where he used to harrass others on his cb setup...he got his practice there, I guess.

So...what do we do? We are out of ideas...a few have LEFT the air due to it.

-

As to the TTY thing, that is another issue, easier to correct.

--

Randy KA1UNW

If you get a shock while
servicing your equipment,
DON'T JUMP!

"Works for me!"

randy@192.153.4.200

You might break an expensive tube!

-Peter Keyes

End of Info-Hams Digest V93 #1108
